

# "BPL is a Pandora's Box of Unprecedented Proportions," ARRL Tells FCC

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NEWINGTON, CT, Jul 8, 2003--Citing the potential for interference to and from Amateur Radio, the ARRL has called on the FCC to "take no steps" to permit Broadband over Power Line (BPL)--a form of power line carrier (PLC) technology. The League has filed a 120-page response--including studies--in response to the FCC's BPL *Notice of Inquiry (NOI)* in ET Docket 03-104, published May 23. The *NOI* asking how the FCC should regulate the delivery of broadband services to homes and businesses using electrical wiring to conduct high-speed digital signals attracted some 1900 comments--many from the amateur community--by the July 7 comment deadline.

"ARRL is unwilling to have the Amateur Service gored with the double-edged sword of an incompatible service that will at once (1) cause widespread interference, and (2) preclude any future changes in the amateur HF allocations," the ARRL said. The League said that based on "diligent and exhaustive research," it's concluded that BPL must avoid any and all amateur MF, HF and VHF allocations without exception. "This interference potential, as a matter of both law and fact, disqualifies access BPL as a potential future competitive broadband delivery system."

**How will the radiation from BPL wiring affect other systems, such as telephone or cable TV?**

So-called "access BPL" would use existing overhead medium-voltage power lines to distribute Internet and broadband services to homes and businesses. Another form of BPL, "in-house BPL," uses electrical wiring inside a building to distribute digital signals. The League said that while it's aware that current Part 15 rules permit BPL, its interference potential remains untested and unrealized, since no access BPL systems are in operation. BPL proponents would prefer that the FCC authorize even higher power levels for such systems, however.

"BPL is a Pandora's Box of unprecedented proportions," the ARRL declared. It asked the FCC to modify its Part 15 rules to prevent interference to users of the HF and low-VHF spectrum from the start and "to prevent consumers' reliance on BPL as an interference-free broadband delivery system."

In announcing its BPL initiative earlier this year, members of the FCC could barely contain their enthusiasm for the technology. The League's comments point out, however, that the FCC had acceded to the utility industry by citing potential interference to and from unlicensed power company PLC power-grid control systems in turning down ARRL's petition for a 136 kHz allocation. ARRL had asked that hams be permitted to transmit on 136 kHz at less than 2 W effective isotropic radiated power (EIRP); the FCC had proposed 1 W EIRP.

"Yet, the same industry, together with BPL manufacturers, is apparently contending now that at HF and VHF, where the power lines are better antennas than they are at LF, that BPL can co-exist with amateur stations using more than 10,000 watts EIRP," the League said. "Both arguments cannot be valid."

Studies appended to the League's comments suggest received signal levels of BPL broadband noise at typical amateur stations would be anywhere from 33.7 dB to 65.4 dB higher than typical ambient noise levels in the worst-case situations. "BPL cannot be deployed using amateur allocations in the MF, HF and VHF bands without severely high interference potential," the ARRL reiterated.

**One technical issue involves the best method to bridging or bypass the typical step-down pole transformer to deliver BPL from the power grid into an office or dwelling.**

Electric utility companies would operate many, if not most, BPL systems. ARRL pointed out that some power companies have demonstrated a less-than-stellar record of cooperation in resolving complaints of power line noise to hams. "It is fair to say that power line interference to Amateur Radio has been a substantial regulatory burden to the Commission," the ARRL said. "It is a very substantial problem now for the Amateur Service, without the addition of BPL to the mix."

The ARRL concluded by urging the FCC to ensure that BPL "is not permitted to operate in or near any Amateur Radio allocations" and that any future changes in ham allocations would "trigger retroactive modifications to BPL facilities" to avoid amateur frequencies. In addition, the ARRL said, spurious emissions from BPL facilities must be substantially attenuated below current Part 15 requirements.

ARRL's complete [filing in response](#) to the FCC's *NOI* is available on the ARRL Web site. The complete [NOI](#) is available on the FCC Web site.

Reply comments in this proceeding are due on or before August 6, 2003. Interested parties may submit electronically filed comments via the FCC's Electronic Comment Filing System ([ECFS](#)). Under ECFS Main Links, click

on "Submit a Filing." In the "Proceeding" field, enter "03-104" and complete the required field. Comments may be typed into a form or you may attach a file containing your comments. Comments also may be submitted via e-mail, per instructions on the ECFS page.

The ARRL has initiated an important Spectrum Defense Fund campaign to support activities to educate government officials on the potential threat that BPL poses to Amateur Radio. To find out more, or to support ARRL's efforts in this area, visit the ARRL's secure [BPL Web site](#).